

STRUCTURAL INTEGRITY ASSESSMENT

for

Kemron Environmental Services
1359-A Ellsworth Industrial Boulevard
Atlanta, Georgia 30318

- Location -

Deferiet Paper Mill Site
400 Anderson Avenue
Deferiet, New York

November 2020

Prepared By:



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EXECUTIVE SUMMARY

This report has been prepared to summarize structural integrity evaluation for the Deferiet Paper Mill property located at 400 Anderson Avenue in Deferiet, New York (subject property or Site). The work was completed by NEU-VELLE LLC (NEU-VELLE) on behalf of Kemron Environmental Services

On October 14, 2020, NEU-VELLE conducted an inspection of the Site buildings to provide judgement on the structural integrity of buildings located at the Site to allow for safe access and future asbestos abatement activities.

Based on review of the site, it is NEU-VELLE's professional judgement that the majority (areas of concern are noted in the report) of the areas within the Site (with the exception of the Wet/Beater Room wall adjacent to the canal) have adequate structural integrity to allow for the safe removal of asbestos containing material without the need for additional structural supports. However, the site is in major disrepair (i.e., debris, openings in floors, partial demolition, cracked concrete, loose bricks, hanging pipes, etc.) and all areas of the buildings and site could not be adequately accessed. Therefore, caution should be taken when working in and around these areas.

Section 1

NEU-VELLE, LLC.

Introduction

1.0 Introduction

1.1 General

This report has been prepared by NEU-VELLE, LLC. (NEU-VELLE) to document the findings of a structural integrity assessment conducted on October 14, 2020 for the Deferiet Paper Mill located at 400 Anderson Avenue in Deferiet, New York. The assessment was conducted to evaluate the site structures (i.e., buildings) and to provide judgement on their structural integrity for future access to conduct asbestos abatement activities, as necessary.

1.2 Project Objectives

The purpose and objective of the assessment includes the following:

- The professional judgement relating to the structural integrity of the following buildings: Turbine Room, Boiler Room, Sulfite Room, Machine Room (and connected structures), Wet/Beater Room, Easement (and elevated Electrical Room), shared walls of the Brookfield building, and Company Garage;
- Determinations for each building of whether safe removal of bulk loose asbestos can occur;
- Determinations for each building of whether safe abatement of asbestos pipe insulation can occur;
- Determinations for each building of whether safe encapsulation of asbestos insulation can occur;
- Determination for each building of whether stabilization activities could be performed to allow abatement and what those stabilization activities would entail;
- Evaluation of all common walls with the Brookfield building to determine what, if any, stabilization activities would be required to ensure protection of the Brookfield building;
- Estimated distances to stop work as to not impact the Brookfield facility; and

- Evaluation of all walls along the Power Canal to determine what, if any, stabilization activities of structures (including bridges, piping, buildings, etc.) would be required to ensure protection of the Power Canal.

1.3 Report Organization

This report presents the findings from the site inspection and structural evaluation activities. Section 2 provides a general overview of the investigation activities and areas inspected. Section 3 provides information on each area as well as the condition and evaluation of structural integrity. Section 4 presents our conclusions and recommendations regarding the interpretation and findings as a result of the inspection and evaluation.

Section 2

NEU-VELLE, LLC.

Project Overview

2.0 Project Overview

2.1 General

This section presents the approach and methodology used in performing the structural integrity assessment of the on-site buildings. In order to meet the objectives of the project, a walk-through and inspection of the buildings was conducted at the site on October 14, 2020 that included the following:

- Review of the Site;
- Review of current and past Site operations;
- Review of future Site activities; and
- Walk-through of accessible areas of the Site.

The following subsections describe the details with respect to the above noted activities.

2.2 Site History

Prior to entering the site, Kemron and the on-site United States Environmental Protection (USEPA) representatives provided a brief overview of the site. According to Site Representatives, the Deferiet Paper Mill site is an inactive paper mill that has been in operation since approximately 1899. The site has numerous buildings and an operating hydroelectric plant which is currently being operated by Brookfield Renewable Power, LLC. Following closure of the paper mill in 2004, various entities have owned the property and in 2012 the site was purchased by Deferiet Development, LLC for the recovery and salvage of stainless steel, brass and other valuable metals. In addition, Deferiet Development initiated the dismantlement of the site buildings in an effort to recover pipes for salvage value. These activities have left the Site in disarray exposing asbestos containing materials to the environment. From 2016 to October 2018, the USEPA implemented activities at the site to apply encapsulants on asbestos-containing pipe to protect Brookfield Renewable Energy Group employees as well as the public from asbestos exposure. In August 2020, an Action Memorandum was signed to allow for the mitigation of asbestos-containing materials throughout on-site buildings that were partially demolished exposing the material to the environment. A map of the site is presented in Appendix A.

Section 3

NEU-VELLE, LLC.

Structural Integrity Assessement

3.0 Structural Integrity Inspection

3.1 General

Accompanied by Kemron and USEPA representatives, NEU-VELLE conducted a walk-thru of accessible buildings/areas of the Site. The following areas were inspected. A brief description of the area and judgment of the structural integrity is presented below. Representative photographs of the areas inspected are presented in Appendix B.

- Company Garage
- Easement
- Turbine Room
- Boiler Room
- Machine Room
- Equipment Room
- Wet/Beater Room
- BrookField Building and Shared Walls

3.2 Company Garage

The Company Garage is a single-story concrete block/brick and steel support structure of approximately 10,000 square foot in size. Based on inspection of the building, the structure is in generally good condition with no obvious structural integrity issues observed. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this area. However, there is an interior masonry block room constructed within the building which shows signs of failing (shifting joints). Any work within this interior room should not be conducted and care should be taken if working in the area.

3.3 Easement

As indicated previously, the site currently has an active hydroelectric plant which is operated by Brookfield Renewable Power, LLC. An access route to the Brookfield plant is provided by an easement area that runs approximately north to south through the plant site. Based on inspection of the structures adjacent to the easement area, they are in generally good condition with no obvious exterior structural integrity issues observed. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this area. However, care should be taken in areas of loose brick on various areas of the structures during work activities.

3.4 Turbine Room

The Turbine Room is a multi-story brick and steel support structure of approximately 6,000 square foot in size. Based on inspection of the building, the structure is in generally good condition with no obvious structural integrity issues observed other than there has been brick removed on the second floor of the structure to apparently gain access to the interior of the structure for equipment removal. It is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this building as long as care is taken in areas where there is loose brick/block or overhanging equipment (i.e. piping, etc.).

3.5 Boiler Room

The Boiler Room is a multi-story brick and steel support structure of approximately 32,000 square foot in size. Based on inspection of the building, the structure is in generally good condition with no obvious structural integrity issues observed other than areas of loose brick throughout the structure. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this building as long as care is taken in areas where there is loose brick/block or overhanging equipment (i.e. piping, etc.).

3.6 Machine Room

The Machine Room is a mainly one-story brick and steel support structure of approximately 25,000 square foot in size. Based on inspection of the building, the structure is in generally good condition with no obvious structural integrity issues observed other than areas of loose brick/block throughout the structure. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this building as long as care is taken in areas where there is loose brick/block or overhanging equipment (i.e. piping, etc.).

3.7 Equipment Room

The Equipment Room is a multi-story brick and steel support structure of approximately 25,000 square foot in size. Based on inspection of the building, the structure is in generally good condition with no obvious structural integrity issues observed other than the area has undergone demolition activities and areas of the building are collapsed. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this building as long as care is taken in areas where there is loose brick/block, collapsed roof structures, or overhanging equipment (i.e. piping, etc.).

3.8 Wet/Beater Room

The Wet/Beater Room is a one-story brick and steel support structure of approximately 30,000 square foot in size. It is located adjacent to the Brookfield Renewable Power which shares a common wall with this area/room. Based on inspection of the building, the majority of the structure is in generally good condition with no obvious structural integrity issues observed. However, the wall adjacent to the Canal shows significant signs of foundation deterioration in the area just adjacent to the power plant. Based on discussions from Brookfield Renewable Power representatives, significant settlement and deformation of the foundation has been recently observed (underwater visual inspection, etc.). Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation should not be conducted within 50 feet of this wall. In addition, based on inspection of the foundation in this area, NEU-VELLE does not believe that temporary shoring and/or supports can be to protect the structure from collapse. It is recommended that a thorough underwater inspection of the foundation be conducted to design a remedy for this area, or it be properly raised. However, other areas of the building can be safely entered as long as care is taken in areas where there is loose brick/block, collapsed roof structures, or overhanging equipment (i.e. piping, etc.).

3.9 Brookfield Building/Shared Walls

The Brookfield Renewable Power Plant building is a multi-story brick and steel support structure of approximately 15,000 square foot in size. It is located adjacent to the Wet/Beater Room. Based on inspection of the building, the structure is in generally good condition with no obvious structural integrity issues observed. In addition, the common wall between the plant and the Wet/Beater appears to be in generally good condition with no apparent structural issues. However, as indicated above, the wall adjacent to the Canal shows significant signs of foundation deterioration in the area just adjacent to the power plant. In the event that this walls foundation becomes increasingly compromised, failure of the Wet/Beater Room wall could occur and compromise the structural integrity of the Brookfield Renewable Power Plant. Therefore, it is recommended that a thorough underwater inspection of the foundation be conducted to design a remedy for this area, or it be properly raised.

Section 4

NEU-VELLE, LLC.

Conclusions and Recommendations

4.0 Summary

4.1 General

This section summarizes the interpretation of the field data and associated findings obtained during the site inspection.

4.2 Conclusions and Recommendations

Based on review of the site, it is NEU-VELL's professional judgement that the majority (areas of concern are noted in the report) of the areas within the Site have adequate structural integrity to allow for the safe removal of asbestos containing material without the need for additional structural supports. As indicated, the site is in major disrepair (i.e., debris, openings in floors, partial demolition, cracked concrete, loose bricks, hanging pipes, etc.) and all areas of the buildings and site could not be adequately accessed. Therefore, caution should be taken when working in and around these areas.

However, it is NEU-VELLE's judgement that the Wet/Beater Room wall adjacent to the Brookfield Power Plant is not safe and work should not be conducted within 50 feet of this wall. In addition, based on inspection of the foundation in this area, NEU-VELLE does not believe that temporary shoring and/or supports can be utilized to protect the structure from eventual collapse. It is recommended that a thorough underwater inspection of the foundation be conducted to design a permanent remedy for this area, or it be properly raised.

Appendix A

NEU-VELLE, LLC.

Site Map

SITE MAP



Appendix B

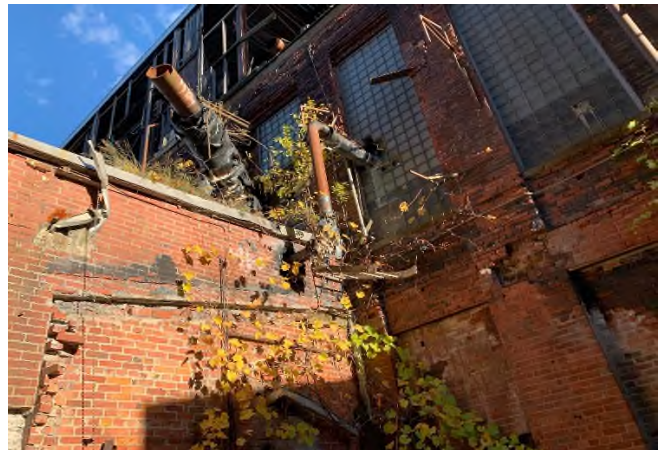
NEU-VELLE, LLC.

Photographs

Company Garage



Easement



Turbine Room



Boiler Room



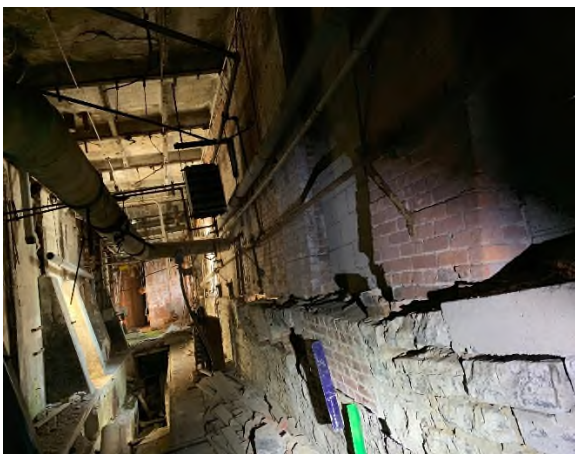
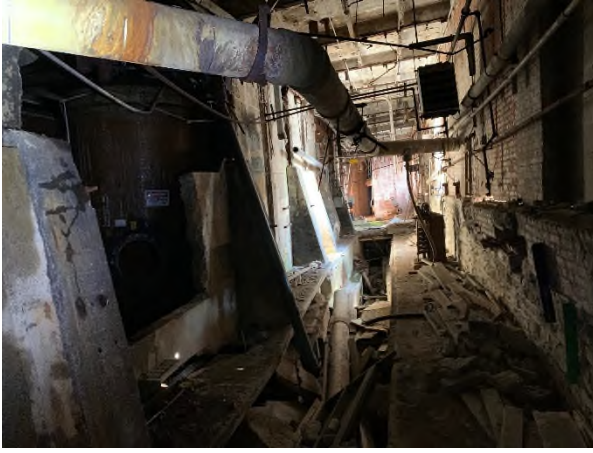
Machine Room



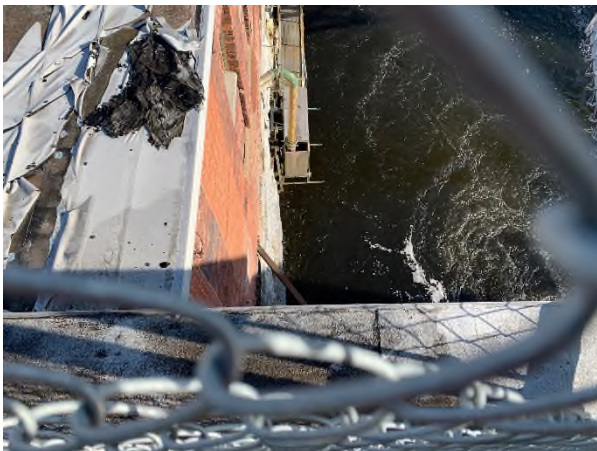
Equipment Room



Wet/Beater Room



Brookfield Building & Shared Walls



Appendix C

NEU-VELLE, LLC.

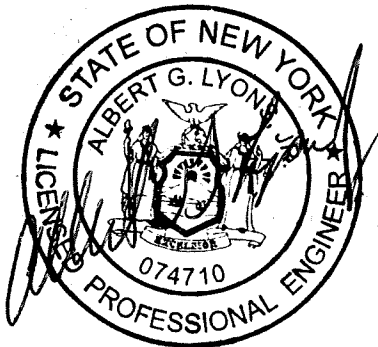
Engineer Certification

STRUCTURAL INTEGRITY ASSESMENT

Deferiet Paper Mill
400 Anderson Avenue
Deferiet, New York

ENGINEER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.



Albert G. Lyons Jr., P.E.
NEU-VELLE LLC

11/12/20
Date